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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/831,722      | 09/06/2001  | Stefan Grosse        | 10191/1728          | 9967             |

26646 7590 11/10/2004

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NEW YORK, NY 10004

EXAMINER

MEEKS, TIMOTHY HOWARD

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1762

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/831,722

Examiner

Timothy H. Meeks

Applicant(s)

GROSSE ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 23-28 and 31-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23, 24, 31-33 and 37-45 is/are rejected.
- 7) ☒ Claim(s) 25-28 and 34-36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Application Status***

The amendment filed on 9/13/04 has been entered. Claims 23-28 and 31-45 are pending as amended.

### ***Withdrawn Rejections***

The rejections in view of the Nishimae et al. reference are withdrawn in view of the claim amendments and applicants arguments at page 8 of the response.

### ***Claim Rejections - 35 USC § 112***

Claims 31, 32, and 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims refer to a "cylindrical hole" however, only a hole was previously defined, not a cylindrical hole.

### ***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 23, 24, 31-33, 37-39, 42, 44, and 45 are rejected under 35 U.S.C. 102(e) as being anticipated by Mosian et al. (6,224,836).

Mosian discloses a device for producing a plasma comprising a microwave generator (56) which launches microwaves through a launching structure (structure between generator 56 and flange (26) in figure 6) and into a guide structure (24) having therein holes (38) through which a dielectric tube carrying a gas passes and to which

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the microwaves are concentrated to form a plasma region in the tube in the area of the holes 38 (see figures 5 and 6 and col. 5, line 1 to col. 7, line 10). Use of a hole diameter of 60-80mm is disclosed at col. 6, lines 29-30. The plasma is used to clean exhaust gases which encompasses chemically reacting gases. Provision of oxygen in the gas is disclosed at col. 6, line 65. A microwave frequency of 2.45 GHz is disclosed at col. 6, line 29.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 40, 41, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mosian et al. (6,224,836).

For each of these dependent claims, Mosian is silent as to the pressure and flow rate of the gas in the tube, and the power of the microwave energy. Because it is well established that "Where principal difference between claimed process and that taught by reference is a temperature difference, it is incumbent upon applicants to establish criticality of that difference", see Ex Parte Khusid 174 USPQ 59 (Bd. of Appeals 1971), and because this principle is clearly applicable other process parameters such as pressure, flow rate, power applied, etc, as is claimed in each of the dependent claims, it

would have been obvious to use values for these parameters as claimed absent evidence showing a criticality for using the claimed values.

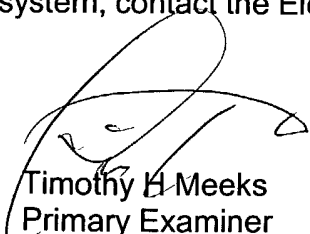
***Allowable Subject Matter***

Claims 25-28 and 34-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy H. Meeks whose telephone number is (571) 272-1423. The examiner can normally be reached on Mon 6-6, T-Th 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Timothy H. Meeks  
Primary Examiner  
Art Unit 1762